Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently Amended) A method, comprising:

configuring a plurality of repeaters operating at a substantially identical communication frequency to coordinate transmissions of data packets and thereby function as an access point with respect to first and second mobile stations that are wirelessly communicatively coupled to the plurality of repeaters;

determining within the plurality of repeaters whether wirelessly transmitting first and second packets to the first and second mobile stations, respectively, will create interference between the first and second packets; and

wirelessly transmitting the first and second packets to the first and second mobile stations, respectively, at different times when it is determined that transmitting the first and second packets will create interference.

2. (Previously Presented) The method of claim 1, further comprising:

operating the plurality of repeaters as a communication channel in accordance with a wireless communication protocol.

3. (Cancelled)

4. (Previously Presented) The method of claim 1, further comprising:

scheduling, at a switch coupled to the plurality of repeaters, transmissions of the first packet and the second packet to avoid interference that would prevent one or both of the transmissions from being received by the first and second mobile stations.

5. (Original) The method of claim 4, further comprising:

detecting whether substantially concurrent transmission of the first and second packets will cause interference prior to performing the scheduling; and

transmitting the first and second packets to the first and second mobile stations without performing the scheduling, if overlapping transmissions of the first and second packets will not cause interference.

6. (Currently Amended) The method of claim 5, wherein if substantially concurrent transmission of the first and second packets causes interference, the method further comprises:

transmitting the first and second packets to the first and second mobile stations, respectively, according to the schedule.

7. (Previously Presented) The method of claim 1, further comprising:

coordinately scheduling, at the plurality of repeaters, transmissions of the first packet and the second packet to avoid interference that would prevent one or both of the transmissions from being received by the first and second mobile stations.

8. (Previously Presented) The method of claim 1, further comprising:

determining whether the first and second packets are to be transmitted substantially simultaneously to the first and second mobile stations; and

transmitting the first and second packets to the first and second mobile stations at different time slots to avoid the interference, if the first and second packets are selected for substantially simultaneously transmission.

9. (Previously Presented) The method of claim 1, further comprising:

maintaining in a first database information regarding whether communications of one of the plurality of repeaters will interfere with another of the plurality of repeaters.

10. (Previously Presented) The method of claim 9, further comprising:

examining the first database to determine whether communications of a selected one of the plurality of repeaters will interfere with another of the plurality of repeaters; and

delaying one of the first and second packets to be transmitted by the selected repeater to the respective mobile station if communications of the selected repeater will interfere with another of the plurality of repeaters.

11. (Previously Presented) The method of claim 9, further comprising:

periodically transmitting a test packet to collect interference information.

12. (Previously Presented) The method of claim 1, further comprising:

maintaining in a second database a list of mobile stations and a corresponding plurality of repeaters that last received transmissions from the mobile stations.

13. (Previously Presented) The method of claim 12, further comprising:

examining the second database to determine whether the corresponding plurality of repeaters associated with the first and second mobile stations, when transmitting substantially currently, will interfere with each other; and

delaying transmissions of one of the first and second packets to the respective mobile station if the transmissions from the corresponding plurality of repeaters associated to the first and second mobile stations will interfere with each other.

14. (Previously Presented) The method of claim 1, further comprising:

performing address translation on the first and second packets to determine respective Ethernet MAC addresses based on respective destination IP addresses of the first and second packets;

identifying which of the plurality of repeaters is closest to the first and second mobile stations having the respective Ethernet MAC addresses;

determining whether interference will occur between the transmissions that would prevent completion of the transmissions; and

scheduling the transmissions of the first and second packets to avoid the interference if interference would occur between the transmissions.

15. (Currently Amended) A method, comprising:

receiving, at a switch, first and second data packets designated for transmission to a first mobile station and a second mobile station, respectively, via a plurality of repeaters transmitting on a substantially identical communication frequency;

detecting whether overlapping transmissions of the first and second packets will result in interference that would prevent completion of the transmissions; and

scheduling transmissions of the first and second packets via the plurality of repeaters to avoid the interference if it is determined that overlapping transmissions of the first and second packets will result in interference that would prevent completion of the transmissions.

16. (Currently Amended) The method of claim 15, wherein if overlapping transmissions of the first and second packets will not result in interference that would prevent completion of the transmissions, the method further comprises:

transmitting wirelessly from the plurality of repeaters the first and second packets to the first and second mobile stations, respectively, without delay.

17. (Previously Presented) The method of claim 15, wherein the plurality of repeaters are operating as a communication channel in accordance with a wireless communication protocol.

18. (Cancelled)

19. (Previously Presented) The method of claim 15, further comprising:

performing address translation on the first and second packets to determine respective Ethernet MAC addresses based on respective destination IP addresses;

identifying which of the plurality of repeaters is closest to the first and second mobile stations having the respective Ethernet MAC addresses;

determining whether there is an interference between overlapping wireless communications of the identified repeater and other repeaters in the plurality of repeaters; and

performing the scheduling if there is an interference.

20. (Previously Presented) A method, comprising:

receiving, at a switch, a packet destined to a mobile station;

determining, at the switch, whether immediately transmitting the packet to the mobile station will cause an interference with other communications destined to the mobile station; and

transmitting the packet to a communication device communicatively coupled to the switch, wherein the packet is forwarded wirelessly to the mobile station when it is determined that transmitting the packet will not cause interference,

wherein the communication device and other communication devices coupled to the switch transmit at a substantially identical communication frequency and coordinate transmissions of data packets, thereby functioning as an access point with respect to the mobile station.

21. (Original) The method of claim 20, wherein the communication device and other communication devices are operating as a communication channel in accordance with a wireless communication protocol.

22. (Cancelled)

23. (Previously Presented) The method of claim 20, further comprising:

delaying the transmission of the packet to the mobile station if it is determined that an interference would occur.

24. (Previously Presented) The method of claim 23, further comprising:

scheduling the transmission of the packet at an alternative time slot where no other communications destined to the mobile station are occurring if it is determined that no interference would otherwise occur.

25. (Previously Presented) The method of claim 23, further comprising:

transmitting the packet to the mobile station without delay if it is determined that no interference would occur.

26. (Original) The method of claim 20, further comprising:

determining a communication device closest to the mobile station; and

scheduling, based in part on a location of the closest communication device, the transmission of the packet to the mobile station, such that there are no other communications occurring to the mobile station.

27. (Original) The method of claim 26, wherein determining the closest communication device comprises:

performing address translation on the packet to determine an Ethernet MAC address corresponding to a destination IP address of the packet; and

identifying a communication device associated with the mobile station having the determined Ethernet MAC address as the closest communication device.

28. (Original) The method of claim 27, wherein the address translation is performed via a table stored within the switch.

29. (Previously Presented) A system, comprising:

a plurality of communication devices coupled to a switch, the plurality of communication devices communicating wirelessly over substantially the same communication frequency with one or more mobile stations,

wherein the plurality of communication devices coordinate transmissions of data packets to function as an access point with respect to the one or more mobile stations, the coordinating including determining, at the switch, whether immediately transmitting the packets to the one or more mobile station via the plurality of communication devices will cause an interference with other communications to the one or more mobile stations.

30. (Previously Presented) The system of claim 29, wherein the switch manages communications between the plurality of communication devices and the one or more mobile stations.

31. (Previously Presented) The system of claim 29, wherein the plurality of communication devices operate as a communication channel in accordance with a wireless communication protocol.

32. (Cancelled)

33. (Currently Amended) An apparatus, comprising:

means for configuring a plurality of repeaters operating at a single frequency to coordinate transmissions of data packets and thereby function as an access point with respect to first and second mobile stations that are wirelessly communicatively coupled to the plurality of repeaters;

means for determining within the plurality of repeaters whether wirelessly transmitting first and second packets to the first and second mobile stations, respectively, will create interference between the first and second packets; and

means for wirelessly transmitting the first and second packets to the first and second mobile stations, respectively, at different times when it is determined that transmitting the first and second packets will create interference.

34. (Currently Amended) An apparatus, comprising:

means for receiving, at a switch, first and second data packets designated for transmission to a first mobile station and a second mobile station, respectively, via a plurality of repeaters transmitting on a substantially identical communication frequency;

means for detecting whether overlapping transmissions of the first and second packets will result in interference that would prevent completion of the transmissions; and

means for scheduling transmissions of the first and second packets via the plurality of repeaters to avoid the interference if it is determined that overlapping transmissions of the first and second packets will result in interference that would prevent completion of the transmissions.

35. (Previously Presented) An apparatus, comprising:

means for receiving, at a switch, a packet destined to a mobile station;

means for determining, at the switch, whether immediately transmitting the packet to the mobile station will cause an interference with other communications destined to the mobile station; and

means for transmitting the packet to a communication device communicatively coupled to the switch, wherein the packet is forwarded wirelessly to the mobile station when it is determined that transmitting the packet will not cause interference,

wherein the communication device and other communication devices coupled to the switch transmit at a substantially identical communication frequency and coordinate transmissions of data packets, thereby functioning as an access point with respect to the mobile station.